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Metallurgical Advisory Board

ROBERT F. MEHL
Chairman, Metallurgical Advisory Board

ORGANIZATION by the National Academy of Sciences–National Research Council of the Metallurgical Advisory Board was announced in the January–February issue of NEWS REPORT. The new Board held its first meeting on February 7 at the National Academy in Washington.

The Metallurgical Advisory Board, composed of leading industrial and academic metallurgists with liaison representatives from military and civilian Government agencies, will advise the Research and Development Board, Department of Defense, on the research and development aspects of the Nation's metals problems. The Board's work will be directly in the interest of national security since metals with extraordinary properties—and frequently in huge quantity—are essential for modern military operations, arms, and armor.

Within the limits of specific problem assignments, the metallurgists are to advise the Research and Development Board on the correlation, coordination, interpretation, and application of metals research and development programs conducted or sponsored by the military departments; suggest new research projects or reorientation of existing research; and collect and distribute such useful metallurgical information as can be gathered by the establishment of close liaison with professional societies, governmental agencies, and academic and industrial organizations devoted to metals and their use.

Preliminary work by the Metallurgical Advisory Board is already in progress on research and development phases of three of the most urgent metals problems: critical and strategic metals and their substitutes, the application of metals to be used at high temperatures, and the development of the presently small titanium industry.

Among the metals in critically short supply listed tentatively for study by the Metallurgical Advisory Board are columbium, tantalum, cobalt, titanium, molybdenum, tungsten, and beryllium. Other metals are, however, expected to be added to this list as the Board progresses in its preliminary studies.

A permanent secretariat and special project committees are to assist the Metallurgical Advisory Board, which also will have the cooperation of the military departments, the Munitions Board, and other Federal agencies actively interested in metallurgical problems. Robert F. Mehl, Head of the Metallurgy Department and Director of the Metals Research Laboratory, Carnegie Institute of Technology, is Chairman of the Metallurgical Advisory Board.

Members of the Advisory Board are: E. C. Bain, Assistant Vice President, United States Steel Corporation; John Chipman, Head of the Department of Metallurgy, Massachusetts Institute of Technology; Charles H. Herty, Jr., Assistant to the Vice President, Bethlehem Steel Company; Zay Jeffries, retired Vice President, General Electric Company; Walter E. Jominy, Supervisor of Metallurgical Research, Chrysler Corporation; A. B. Kinzel, President, Union Carbide & Carbon Research Laboratories, Inc.; Paul D. Merica, Executive Vice President, International Nickel Company of Can-

ada, Ltd.; Albert J. Phillips, Director of Research, American Smelting and Refining Company; Leo F. Reinartz, Assistant Vice President and Manager, Armco Steel Corporation; Cyril S. Smith, Director, Institute for Study of Metals, University of Chicago; Earle C. Smith, Chief Metallurgist, Republic Steel Corporation; Kent R. Van Horn, Associate Director of Research, Aluminum Company of America; and Clyde Williams, Director, Battelle Memorial Institute.

Ex officio members of the Board are: C. Richard Soderberg, Chairman, Division of Engineering and Industrial Research, National Research Council; Oliver C. Ralston, Chief Metallurgist, U. S. Bureau of Mines; and John G. Thompson, Chief of the Metallurgy Division, National Bureau of Standards. Liaison representatives will be designated by the military departments.

Present also at the first meeting of the Metallurgical Advisory Board were: John D. Small, Chairman of the Munitions Board; William Webster, Chairman of the Research and Development Board; and Detlev W. Bronk, President of the National Academy of Sciences and of The Johns Hopkins University, as well as representatives of the military departments.

Speaking for the Munitions Board, Major General Francis H. Griswold, USAF, Military Director for Requirements Management, pledged that the Munitions Board would make available all of its data on strategic priorities, and asked in return that the Metallurgical Advisory Board "furnish advice and make recommendations which can result in the increased availability of strategic and critical materials."

Mr. Webster, in welcoming the civilian metallurgists, emphasized the need for the Advisory Board to initiate "new proposals in the national interest" as well as to operate in a general consulting and functional capacity where specifically requested.

"It is not intended that your program usually be concerned with the general economic aspects of production and supply, except as this may be considered necessary by the Board to a comprehensive understanding of a particular objective," he said. "It would seem most important, however, that deliberations of the Metallurgical Advisory Board include aspects of both partial and total mobilization wherever germane to their reports and recommendations. Proper balance should be maintained between fundamental and applied research consistent with the estimated requirements of manpower and of strategic urgency."

Vernon H. Schnee, Vice President of the University of Oklahoma, and Director of the University's Research Institute, has agreed to serve as Executive Director of the Metallurgical Advisory Board. He will provide overall administration of projects and supervise liaison with Government, industry, professional societies, and universities. William Mahin, Director of Research, Armour Research Foundation, has become Director of the Metallurgical Projects Division. Examples of current projects of first importance are high temperature metals and titanium. Zay Jeffries will head the activities on critical and strategic metals and their substitutes. E. M. Wise, Development and Research Department, International Nickel Company, Inc., will assist Dr. Jeffries in this work, and James R. Long, Metallurgist, U. S. Bureau of Mines, and J. Meierdirk, Metallurgist, Turbine Division, General Electric Company, have been appointed to the technical staff.

Pointing out that the National Academy of Sciences was founded by Act of Congress with a charter signed by Abraham Lincoln, Dr. Bronk told the Board that the Academy had always tried to keep alive the interest of civilian scientists in the research and development needs of the military forces.

"To meet the country's changing needs for scientific research, the Academy has often modified the character and scope of its activities," Dr. Bronk said. "Today's meeting of many of the country's most distinguished civilian metallurgists represents the latest effort of the Academy to further the welfare of the Nation. 1951 is not 1940, and I do not think we can organize science in 1951 on the same basis as science was organized or mobilized in 1940. We know today that we are going to need continuing basic research. Individual responsibility for such research must be preserved, and the Academy is uniquely fitted for this task. The Government does not take over private functions unless there is a default by

the individuals and organizations responsible for them. Your voluntary attendance here today, no less than the partnership of the National Academy of Sciences and the Research and Development Board in this metallurgical program, is proof that individual responsibility can be preserved and utilized in the best interests of our country."

A valuable contribution to the work of the Board will be made by the professional societies. Already some urgent work has been undertaken by the societies, but there will be need for more in the future.

International Chemical Conclave

HARRY L. FISHER
Organizing Secretary, International Congress of Chemistry

EARLY in September 1951, more than ten thousand chemists and chemical engineers from at least thirty-eight countries will gather in New York City to attend the celebration of the Seventy-fifth Anniversary of the American Chemical Society, the XVIth Conference of the International Union of Pure and Applied Chemistry, and the XIIth International Congress of Pure and Applied Chemistry. The Society meets September 3–7, the Union, 8–9, and the Congress, 10–13. Following the New York meeting, the Union delegates will come to Washington where they will complete their work and participate in the celebration of the Fiftieth Anniversary of the National Bureau of Standards.

Arrangements have been made by a committee under the chairmanship of John H. Nair, who is also Chairman of the New York Section, for the celebration of the Diamond Jubilee of the American Chemical Society. A plaque will be unveiled commemorating the place in the Lecture Room of the College of Pharmacy of New York University on Washington Square where the first meeting was held in 1876. A colorful ceremonial will take place on Wednesday afternoon, September 5, in the 71st Regiment Armory when representatives of about fifty countries will present scrolls of greeting to the President of the Society, N. Howell Furman; James B. Conant, President of Harvard University, will deliver the main address. In the evening a commemorative banquet will be held at which the President of the United States will speak.

The International Union of Pure and Applied Chemistry is a continuing organization which meets biennially in a different country. The last meeting in the United States was in Washington in 1926. The work of the Union is carried on through commissions of which there are more than twenty. They deal with such subjects of international interest as physico-chemical symbols and constants; atomic weights; nomenclature; analytical reactions and reagents; and standardization of the purity of chemical products.

The officers of the Union for 1947–51 are: *President,* H. R. Kruyt, Belgium; *Vice Presidents,* Sir Ian Heilbron, Great Britain, P. Jolibois, France, P. Karrer, Switzerland, A. Nesmeyanov, U. S. S. R., W. A. Noyes, Jr., U. S. A., and A. Tiseliuss, Sweden; *General Secretary,* R. Delaby, France.

Following the meetings in New York, delegates to the Union will go by special train to Washington. They will visit the National Bureau of Standards on the afternoon of September 13 and attend a reception at the home of the Director. In the evening the delegates will join members of the Chemistry Division of the Bureau at a banquet celebrating the Fiftieth Anniversary of the Bureau. On September 14 the Council of the Union will meet at the National Academy of Sciences to complete the business of the Union.

The International Congress of Pure and Applied Chemistry meets every four years. The XIth Congress was held in London in 1947; the last congress to be held in the

United States was the VIIIth, in New York City in 1912. Each congress is an entity in itself and meets under the auspices of the Union. The objects of the congress are the advancement of pure chemistry and its applications to industrial and practical life, as well as the strengthening of relations among chemists and chemical engineers throughout the world. The honorary president of the 1951 Congress is James B. Conant.

Arrangements for the XIIth Congress are being made by the Division of Chemistry and Chemical Technology of the National Research Council. Papers will be presented before sixteen scientific sections, some of which will meet on all four days of the Congress. Each afternoon at 4:30 a general lecture will be given by a chemist of world renown. Alexander R. Todd of England will lecture on "Chemistry of the Nucleotides," E. W. R. Steacie of Canada on "The Decomposition of Organic Compounds," Venancio Deulofeu of Argentina on "The Chemistry of Some South American Plant Products: Alkaloids and Flavonols," and Kaj Ulrik Linderstroem-Lang of Denmark on "Structure and Enzymatic Breakdown of Proteins."

Financial support for the Congress is being provided entirely by industrial companies. More than half of the desired $250,000 has already been received. These funds will be used for the Diamond Jubilee celebration; travel expenses of foreign guests invited to speak at the Diamond Jubilee and to lecture before the Congress; modest grants for living expenses of delegates and Commission members of the Union while in New York; organization and administration of the Congress; and for publicity and entertainment.

More than six hundred titles with their abstracts have been received for the Congress program, almost half of which are by foreign authors. The papers are being reviewed by the executive committees of the sections and, if acceptable, their titles will be placed on the final program which will be published in *Chemical and Engineering News* for June 25. The Congress will not publish papers but will publish all abstracts in a special volume to be distributed at the opening of the Congress.

The headquarters office of the organizing committee for the Chemistry Congress is located at the National Research Council in Washington, D. C. At the time of the Congress, this office will be situated in the Hotel Statler, New York City.

Biology and Agriculture

RALPH E. CLELAND
Chairman, Division of Biology and Agriculture

ONE of the earliest actions of the National Research Council was the organization in 1918 of its Division of Biology and Agriculture, to serve the plant and animal sciences and their applications in agricultural and industrial arts. A. F. Woods was the first Chairman of the Division, followed by C. E. McClung, L. R. Jones, F. R. Lillie, R. A. Harper, M. M. Metcalf, B. M. Duggar, L. J. Cole, William Crocker, L. L. Woodruff, C. E. Allen, W. C. Curtis, D. S. Johnson, F. Payne, I. F. Lewis, R. E. Coker, Robert F. Griggs, R. E. Zwemer (acting Chairman), J. S. Nicholas and R. E. Cleland. M. O. Lee is the present Executive Secretary.

The membership of the Division consists of the official representatives of thirty affiliated biological societies and liaison representatives from the U. S. Departments of Agriculture and Interior. Within the Division the organization consists of the Agricultural Board, the Food and Nutrition Board, and the American Institute of Biological Sciences, each with a group of committees that are formed or discharged

from time to time as new projects are undertaken or work is completed. In addition, a varying number of committees are directly organized under the Division.

The long-range work of the Division is accomplished chiefly through its committees, forty-three in number at present. When a proposal is presented to or initiated by the Division, it is examined carefully by authorities in the field and, if it appears practicable and important, a formal committee is established. Members of these committees serve without compensation except for expenses.

Historically, the Division has had a part in the establishment of a number of important institutions that have now matured to a fully independent status. Among those are the Barro Colorado Island Biological Laboratory, *Botanical Abstracts, Biological Abstracts,* the Commission on the Standardization of Biological Stains, and the American Type Culture Collection.

The Agricultural Board was formed in 1944, under the chairmanship of W. C. Coffey, President of the University of Minnesota, serving at first chiefly the fields of animal production and veterinary medicine. In 1948, under the chairmanship of R. C. Newton the Board membership was enlarged to represent most of the major fields of agricultural science. W. E. Krauss of the Ohio Agricultural Experiment Station is the present Chairman, appointed in 1950, and LeRoy Voris is Executive Secretary.

The Committee on Animal Health, with W. A. Hagan, Cornell University, as Chairman, has recently completed a study of the control of hog cholera, soon to be published. The Committee on the Laws, Rules, and Regulations Governing Animal Health, under W. J. Loeffel, University of Nebraska, is engaged in the monumental and important task of codifying the numerous state laws relating to animal health. The Committee on Animal Nutrition is one of our oldest committees, antedating the Agricultural Board itself. Under the chairmanship of L. C. Norris, Cornell University, the Committee has published *Recommended Nutrient Allowances* for a variety of domestic animals. These are generally regarded as standards and are used by industry and growers, and as textbooks in courses in animal nutrition. Subcommittees have been established for the following: beef cattle, dairy cattle, horses, poultry, sheep, swine, dogs, furbearing animals, and rabbits. A new subcommittee on the Use of Hormones in Animal Feeding has just been set up.

The Committee on Feed Composition, with R. V. Boucher of Pennsylvania State College as Chairman, is engaged in the analysis of feeds and publication of tables showing amounts of nutrients available. The work of this Committee is the necessary counterpart of that of the Committee on Animal Nutrition. The Committee on Milk Production, Distribution and Quality (Joint with the Food and Nutrition Board) has W. E. Krauss as Chairman and A. C. Dahlberg of Cornell University as Executive Secretary. With $65,000 of RMA funds, all cities over 100,000 population have been surveyed from the standpoint of laws, regulations, and trade practices, and six cities are currently being studied intensively to ascertain the effect of these on production, distribution, and quality. The Committee on Public Health Aspects of Brucellosis (joint with the Medical Division) with W. W. Spink of the University of Minnesota as Chairman had as its latest activity the organization of the Inter-American Congress of Brucellosis which met in Washington last November.

The Food and Nutrition Board was established in 1940 at the request of the Division of Consumer Protection of the National Defense Council. Set up as a committee, its work soon became so diversified that it reorganized in 1941 as a board under Russell M. Wilder; Frank G. Boudreau of the Milbank Memorial Fund became Chairman and still guides the destinies of the Board. LeRoy Voris is Executive Secretary. The Board derives most of its general support from the Milbank Memorial Fund, the Nutrition Foundation, and the Williams-Waterman Fund of the Research Corporation.

Some sixteen committees are presently active. The Committee on Food Protection is a new committee which has obtained considerable support from industry. It is studying the possible biological effects of the numerous chemicals which are introduced

intentionally or accidentally into food. It has served in an advisory capacity to the Delaney Committee of Congress, investigating chemicals in food. The Committee on Food Economics is a source of information on per capita food consumption here and abroad. The Committee on Cereals is responsible for the now widespread enrichment of bread, rice, flour, corn meal, and other products, and for the introduction of iodine into table salt. Laws requiring enrichment of wheat flour are now in force in twenty-six states. The Committee on Milk is presently working for the increased use of non-fat milk solid in bread and ice cream, thus enriching the protein content of these foods, especially important to low-income groups. The Committee on Dietary Allowances has published the 3rd edition of its *Recommended Dietary Allowances,* a standard work used by institutions, dietitians, and others. It has recently prepared a report dealing with nutritional allowances in times of rationing and advising in regard to the setting up of a rationing program. The Committee on Therapeutic Nutrition, with several subcommittees, established at the request of the Surgeon General of the Army, is bringing together information on the nutritional aspects of acute illness, injury, and convalescence. A special committee has recently prepared for the NSRB a report on food and nutrition research with special reference to National Defense.

The American Institute of Biological Sciences includes twenty societies, sixteen of which are full members, and four affiliates. It was established two years ago within the framework of the NRC. C. J. Hylander is the Executive Secretary. The Institute has a number of activities and accomplishments to its credit. Its Committee on Selective Service became General Hershey's advisory committee in biology and agriculture and has been named as his permanent advisory group in this field. The Handbook Committee, with T. C. Byerly of the U. S. Department of Agriculture as Chairman, is developing a *Handbook of Biological and Medical Data* with funds supplied by the U. S. Air Force, to be published by W. B. Saunders Company. Errett C. Albritton is the editor. Advisory committees to the office of Naval Research have been set up in the fields of biochemistry, general biology, and physiology. A contract has been obtained from ONR for about $22,000 to enable *Biological Abstracts* to bring its indices up to date. The Institute has the responsibility for building the Register of Scientific Personnel so far as it relates to biology, working under a contract with the Office of Scientific Personnel of the NRC. At the request of a number of constituent societies, AIBS has organized on two occasions the annual meetings of these societies; these were held in Washington in 1948 and in Columbus, Ohio, in 1950.

There are fifteen committees which are divisional in character, rather than part of the above organizations. The Committee on the American Type Culture Collection has recently raised $15,000 to assist the Collection, has helped it to achieve a balanced budget, and is now working on the problem of finding it a permanent location. The Committee on Waste Disposal, under a grant from the National Lead Company, has completed a study of the effect of waste disposal in the Raritan River. Part of their findings have been published and a definitive report will soon appear. The Committee on Radiation Biology is engaged in preparing a three-volume series on *Radiation Biology* which will be published by McGraw-Hill. The volumes will deal with high energy, ultraviolet, and visible radiation, respectively. Alexander Hollaender of Oak Ridge National Laboratory is editor of the series. A committee has recently been established to rescue fast-disappearing native strains of maize in Latin America. Funds are being obtained from Point Four authorities for the exploratory phases of the work and additional funds are being sought from other sources for the establishment and maintenance of storage centers. Another recently appointed committee is one on the Conservation of Replaceable Resources.

Thus, the activities of the Division are numerous and varied. Much of the advice which it gives and much of the information which it obtains for governmental and other agencies is handled by the central office and is not referred to committees. The work of the Division is limited by its financial resources, and many important projects cannot be undertaken for lack of funds.

ANNOUNCEMENTS

AMPHIBIOUS OPERATIONS

Recent experiences of the United Nations in Korea have demonstrated the necessity for the United States to be prepared to conduct amphibious operations in a variety of locations and under conditions never before encountered. Recognizing this situation, the National Academy of Sciences–National Research Council, at the request of the Office of Naval Research, has formed a committee to deal specifically with research and development problems pertaining to amphibious operations.

The Committee on Amphibious Operations generally follows the organization of the Committee on Undersea Warfare—having a central committee made up of outstanding leaders in civilian science and engineering drawn from both universities and industry. Dean Morrough P. O'Brien of the University of California has been selected as chairman of the Committee to serve with the following members: John Burchard, Massachusetts Institute of Technology; Admiral Edward Cochrane, USN retired, U. S. Maritime Commission; Edwin Land, Polaroid Corporation; C. W. LaPierre, General Electric Company; Roger Revelle, Scripps Institution of Oceanography; Hartley Rowe, United Fruit Company; Henry Schade, University of Michigan; Roderick Stephens, Sparkman and Stephens, Naval Architects; Lorenz Straub, University of Minnesota; and John S. Coleman of the NRC who also serves as executive secretary of the Committee.

The Committee on Amphibious Operations will apply scientific knowledge and methods to the problems of amphibious operations. It will review, analyze, and evaluate current research and development; and collect, collate, and disseminate scientific and technical information pertaining to amphibious operations. Plans for the Committee are still in the formative stage, but it appears certain that initial efforts will include studies of problems relating to beach intelligence, beach trafficability, and analysis of "typical" amphibious operations. It is expected that the Committee will sponsor ad hoc full-time panels on various aspects of amphibious operations.

FOREIGN TRAVEL

The Division of International Relations, NRC, and the Office of Science Adviser, Department of State, are cooperating in a program which should assist scientists who plan to travel abroad in connection with research activities, lecture programs, symposia, international conferences, and similar scientific undertakings. Preparation for travel of this nature frequently is facilitated by coordination of public and private endeavors. To help achieve this coordination the Division of International Relations has agreed to serve as a central office through which non-government scientists and scientific groups may contact the Office of the Science Adviser and in turn other agencies of the Department concerned with international relations in science. Accordingly it is suggested that those contemplating travel write the NRC, outlining their travel plans. Every effort will be made to assist them on special problems.

DELEGATES TO SCIENTIFIC MEETINGS

The U.S.A. National Committees of the International Unions of Crystallography, Pure and Applied Physics, Geodesy and Geophysics, and Pure and Applied Chemistry have nominated delegates and alternate delegates to the General Assemblies of their unions to be held in 1951. These nominations have been reviewed by the Chairman of the NRC and transmitted to the Secretary of State for approval. In addition to the official delegates a number of scientists will attend the General Assemblies as NRC representatives. These individuals are nominated by the U.S.A. National Committees and appointed by the Chairman of the NRC. When appointments are complete they will be announced in NEWS REPORT.

PROGRAM FOR DENTISTRY

A. LeRoy Johnson, former head of the Harvard School of Dental Medicine, has joined the staff of the Division of Medical Sciences as Professional Associate in Dentistry. This is a new position, made possible by a grant of $20,000 from the Markle Foundation. Prior to his appointment, Dr. Johnson was a consultant in professional education with special references to medicine and dentistry under a tripartite grant from the Rockefeller and Markle Foundations and the Carnegie Corporation.

Dr. Johnson will make a survey of fundamental and applied research pertaining to dentistry and assist the Division in formulating plans which will stimulate fundamental research in pertinent areas, and better coordinate advisory services in the dental field with those in other scientific and clinical disciplines.

FOREIGN APPOINTMENT

Hans T. Clarke, Professor of Biochemistry, College of Physicians and Surgeons, Columbia University, will go to London in July in connection with the program for exchange of scientific information sponsored by the Department of State. Dr. Clarke has asked to be relieved of the Chairmanship of the Merck Fellowship Board of the NRC, a position which he has held for three years.

CHEMICAL-BIOLOGICAL COORDINATION CENTER

McKeen Catell, Professor of Pharmacology, Cornell University Medical College, was appointed Chairman of the Executive Committee of the Chemical-Biological Coordination Center on January 29. Other members of the Committee appointed at the same time are: Ralph E. Cleland, Chairman of the Division of Biology and Agriculture; W. A. Noyes, Jr., Chairman of the Division of Chemistry and Chemical Technology; M. C. Winternitz, Chairman of the Division of Medical Sciences; and W. R. Kirner, Executive Secretary of the Chemical-Biological Coordination Center. Douglas Whitaker, Chairman of the NRC, and G. Donald Meid, Business Manager, will be *ex-officio* members of the Committee. Dr. Catell will also serve as Chairman of the Center's Advisory Committee.

On March 26, Steven Krop was appointed Research Associate to the Center's Physiology-Pharmacology Subcommittee. Dr. Krop was Director of the Department of Pharmacology and Chemotherapy of the Warner Institute for Therapeutic Research prior to joining the NRC staff.

SYMPOSIUM ON SHOCK

A three-day Symposium on Shock will be held at the Army Medical Center on May 7, 8, and 9. This Symposium is being jointly sponsored by the Division of Medical Sciences of the NRC and the Army Medical Service Graduate School. The purpose of the Symposium is to bring together men of many scientific disciplines from various parts of the United States and foreign countries. It will afford an opportunity for an exchange of ideas and an organized consideration of the problems of shock and its treatment.

AGRICULTURAL BOARD

J. F. Sykes, U. S. Department of Agriculture, has been appointed Chairman of the Subcommittee on Use of Hormones in Animal Feeding. This is a new subcommittee of the Committee on Animal Nutrition of the Agricultural Board.

COMMITTEE ON SHIP STEEL

Peter E. Kyle, Professor of Metallurgy, Cornell University, has been appointed Chairman of the Committee on Ship Steel, succeeding Robert F. Mehl who resigned to become Chairman of the new Metallurgical Advisory Board.

APPOINTMENT IN PHYSICAL SCIENCES

Brian O'Brien, Research Professor of Physics and Optics and Director of the Institute of Optics at the University of Rochester, has been appointed Vice Chairman of the Division of Physical Sciences. Dr. O'Brien is Vice President of the Optical Society of America.

ANNUAL MEETING NATIONAL ACADEMY OF SCIENCES

The annual meeting of the National Academy of Sciences was held in Washington on April 23, 24, and 25. The program included the presentation of scientific papers on Monday, April 23, in the Academy building, the annual business meeting and dinner on Tuesday, and a special scientific session at the National Bureau of Standards on Wednesday in recognition of the fiftieth anniversary of the founding of the Bureau. On Monday evening, Ira Sprague Bowen, Director of the Mt. Wilson and Palomar Observatories, addressed Academy members and guests on the subject of "The Palomar Observatory." The scientific sessions and Monday evening lecture were open to the public. A total of forty-eight papers were read at the three-day meetings.

At the special session at the National Bureau of Standards, Lyman J. Briggs, Director Emeritus, reviewed the early work of the Bureau, and Director E. U. Condon outlined the Bureau's present program. The final session was devoted to a symposium on artificially produced mesons. The speakers described work in progress at their respective institutions. Participants in the symposium were E. T. Booth, Nevis Cyclotron Laboratories, Columbia University; B. P. Feld, Massachusetts Institute of Technology; C. Richman, University of California; A. Roberts, University of Rochester; and Robert R. Wilson, Cornell University.

ELLIOT GOLD MEDAL AWARD

John Thomas Patterson, Director of Zoological Research at the University of Texas, received the Daniel Giraud Elliot gold medal awarded by the National Academy of Sciences at the Academy dinner on Tuesday, April 24, at the Washington Hotel.

The Elliot Medal is awarded annually to the author of a paper on original research in zoology or paleontology which is judged to be most meritorious and worthy of honor. In presenting Professor Patterson to the President of the Academy, Alexander Wetmore, Chairman of the Elliot Fund Committee, cited Professor Patterson's outstanding contributions to genetics, particularly his papers on isolating mechanisms contained in the volume entitled *Studies in the Genetics of Drosophila: V. Isolating Mechanisms,* issued as a University of Texas publication in 1947. The studies reported in this volume mark the culmination of research in the phylogeny of *Drosophila* by genetical methods which Dr. Patterson initiated at the University of Texas more than twenty-five years ago. As a combination of experimental and taxonomic investigation it represents a highly significant contribution to research on the species problem.

Dr. Patterson, a member of the National Academy of Sciences, received the B.S. degree at the College of Wooster in 1903 and the Ph.D. in zoology at the University of Texas in 1908. He became instructor at the University of Texas in 1908, Professor in 1913, and Director of Zoological Research in 1928.

Under the terms of the gift establishing the Elliot award, the Secretary of the Smithsonian Institution and the Scientific Director of the American Museum of Natural History are designated judges for the selection of the Elliot medalist. The committee making the present award comprised Alexander Wetmore, Smithsonian Institution, Albert E. Parr, American Museum of Natural History, Carl O. Dunbar, Yale University, and A. H. Sturtevant, California Institute of Technology.

FOOD PROTECTION COMMITTEE

One of the important functions of the Food and Nutrition Board of the NRC is being carried on by the Food Protection Committee. This Committee, assisted by four subcommittees, is studying a wide variety of problems related to the production of high quality food. To assure maximum

coordination of work under way in this field, the Committee keeps both public and private research agencies informed of its activities and disseminates all pertinent scientific information relating to problems of food protection.

Among the numerous problems under study by the Committee is one pertaining to the protection of food in which chemical additives are used. The Committee is reviewing current research on the utilization of chemicals in food production, processing, and preservation and hopes to be in a position to advise and assist industry and governmental agencies in the integration of these studies and the promotion of additional research if this becomes desirable in the public interest.

GEOLOGY AND GEOGRAPHY

The annual meeting of the Division of Geology and Geography, NRC, will be held in Washington, April 27 and 28. On the first day members of the Division and committee chairmen will report. The second day will be devoted to a conference on "Maps and Mapping Problems," under the chairmanship of Stephen B. Jones, Vice-Chairman of the Division, and a discussion on "How to Effectively Preserve and Use a Scientist's Time," led by Ernst Cloos, Chairman of the Division. The following papers will be presented at the conference: "Geological Mapping," Edmund Spieker; "Advances in Photogrammetry," David Landen; "Maps and National Defense," Arch Gerlach; "The National Mapping Program," Charles H. Davey; and "Advances in Mapping Human Phenomena," Edward L. Ullman.

MEDICAL SCIENCE

Blood Coagulation

A Subcommittee on Blood Coagulation, reporting to the Committee on Surgery, has been established by the Division of Medical Sciences. The purpose of this Subcommittee is to bring together representative investigators on the mechanism of blood coagulation. It is hoped that this group can cut through the barriers of conflicting terminologies, achieve a greater meeting of minds on the concepts involved, and encourage research aimed at resolution of the more crucial unsettled problems.

Walter H. Seegers of Wayne University has been appointed Chairman of the Subcommittee. Other members are: J. Garrott Allen, University of Chicago; Benjamin Alexander, Harvard University; Kenneth M. Brinkhous, University of North Carolina; J. Haskell Milstone, Yale University; and L. M. Tocantins, Jefferson Medical College.

Fluorination of Public Water Supplies

In an attempt to clarify widespread differences of opinion on the desirability of fluorinating public water supplies, the Division of Medical Sciences has appointed an ad hoc committee to examine the problem. This group will review all pertinent data and seek to determine the efficacy of this procedure in the prevention of caries, its possible toxicological effects, and the technical problems involved in fluorination and control of public water supplies.

Kenneth F. Maxcy, Johns Hopkins University, has been appointed Chairman of the ad hoc committee. Other members are: J. L. T. Appleton, University of Pennsylvania; Basil G. Bibby, University of Rochester; H. Trendley Dean, U. S. Public Health Service; A. McGehee Harvey, Johns Hopkins University; Francis F. Heyroth, University of Cincinnati; A. LeRoy Johnson, NRC; Willard Machle, NRC; Harold A. Whittaker, University of Minnesota; and Abel Wolman, Johns Hopkins University.

Committee on Stress

The concept of the organism's response to stress, as distinct from the separate responses of individual organs to particular insults, has become increasingly important in military as well as civilian medicine. An ad hoc committee on stress convened on March 13, at the request of the Department of the Army, to discuss how problems in this field might best be approached. The ad hoc committee recommended appointment of a continuing committee with a sufficiently broad biological orientation to encompass the effects of psychiatric, endocrine, fatigue, traumatic, and infectious processes.

Conference on Cold Injuries

Experiences of the past winter in Korea and Alaska, as well as findings of recent research, will be reviewed in a Conference on Cold Injuries to be held in Washington at the Army Medical Center on April 25. Similar conferences in World War II resulted in revision of military treatment procedures, and another in 1948 outlined research needs. The present Conference is designed to serve both purposes, namely, to review existing directives in the light of current knowledge, and to plan future research with particular emphasis on clinical studies in the early stages of frostbite and trench foot. The Conference is sponsored by the Subcommittee on Vascular Surgery, NRC.

SCIENTIFIC PERSONNEL

CONFERENCE ON SCIENTIFIC MANPOWER PROBLEMS

On February 16, 1951 representatives of all the major fields of science, including officially appointed representatives of scientific organizations, met at 2101 Constitution Avenue, Washington, on the invitation of the National Academy of Sciences–National Research Council to consider problems and policies affecting the training and utilization of scientists and engineers. Following the definition and discussion of various issues outlined subsequently, the following recommendations were made and unanimously approved.

That a National Scientific Personnel Board of the type described in the Report of the Scientific Manpower Advisory Committee of the National Security Resources Board be established immediately under appropriate governmental auspices.

That there be created within the Department of Defense a Reserve Personnel Board comprising scientifically and technically qualified members of the Army, Navy, and Air Force, and of industry and universities to formulate policies relating to the call, assignment, and utilization of scientists and engineers in reserve status. It was also recommended that regional boards of similar composition be established under conditions formulated by the Reserve Personnel Board, and to implement policies established by that Board.

That the effective utilization of scientific or engineering specialists in military or civilian duties should be on the basis of the following considerations:

a) Whether the individual is engaged in a job which is essential to the national security, health, or public welfare.

b) Whether the individual's work requires the special training and experience he possesses and whether such training and experience are being largely utilized in his work.

c) Whether personnel in their several categories or fields of specialization are likely to be in short supply and of vital importance under further mobilization.

That many other specialized skills and fields of learning are of great importance to the sciences and to the national defense. Accordingly, it is essential to maintain and develop the flow of educated and trained personnel in these other fields. It may, accordingly, become necessary to create specialized personnel boards for these other fields of knowledge and to provide for the coordination of such boards with those previously established for science and medicine.

SELECTION OF MILITARY MANPOWER

Modern techniques and research in selection, classification, and assignment of military manpower were discussed in a three-day Symposium held at the National Academy of Sciences on April 12, 13, and 14. The Symposium was organized at the request of the Research and Development Board, Department of Defense. Leonard Carmichael, Chairman of the Section on Psychology of the National Academy of Sciences and President of Tufts College, served as general chairman.

Following a brief welcoming talk by Detlev W. Bronk, President of the Academy, Dr. Carmichael spoke on the nature of manpower problems and then opened the Symposium. Among the speakers on the opening program were Frank A. Geldard, Chairman, Human Resources Committee, Research and Development Board; M. H. Trytten, Director, Office of Scientific Personnel, NRC; and Wallace O. Fenn, member, Medical Sciences Committee, Research and Development Board.

Results of the three-day program will be summarized in a subsequent issue of NEWS REPORT.

MEDICAL FELLOWSHIPS

The Medical Fellowship Board of the Division of Medical Sciences, NRC, announces the appointment of twenty-one postdoctoral fellows for the academic year 1951-52. Four of these fellows will be continuing under appointments made in previous years. These fellowship awards are made possible by generous grants from the Rockefeller Foundation, National Foundation for Infantile Paralysis, and National Tuberculosis Association.

The following list of fellowship appointees indicates the institution from which the recipient received the doctorate as well as the nature and location of his fellowship research:

Welch Fellows in Internal Medicine

George J. Gabuzda, Jr. (M.D., Harvard Medical School, 1944)
Ascites and edema in cirrhosis of the liver; protein and amino acid metabolism; folic acid metabolism in clinical scurvy; antibiotics and nutrition—Thorndike Memorial Laboratory, Boston, with Charles S. Davidson.

Irving M. London (M.D., Harvard Medical School, 1943)
Porphyrin, protein, and cholesterol metabolism —Columbia University, with David Rittenberg.

Charles R. Park (M.D., Johns Hopkins University, 1941)
Identification and study of mode of actior of pituitary substance(s) which inhibit glucose utilization by tissues—Washington University, with Carl F. Cori.

John V. Taggart (M.D., University of Southern California, 1940)
Metabolic aspects of active cellular transport—Columbia University, with Robert F. Loeb.

Senior Fellows in Poliomyelitis

Edgar A. Bering, Jr. (M.D., Harvard Medical School, 1941)
Dynamics of water and ion exchange in the central nervous system and cerebrospinal fluid—Peter Bent Brigham Hospital, Children's Hospital, and Harvard Medical School, with Franc D. Ingraham and Francis D. Moore.

Edward H. Kass (Ph.D., University of Wisconsin, 1943; M.D., University of California, 1947)
Cellular mechanisms by which ACTH affects the course of viral and bacterial infections; fate of antigens in the animal body using labeled antigens; rate of nucleic acid synthesis in tissue cultures of influenza virus—Thorndike Memorial Laboratory, Boston, with Maxwell Finland.

Fellows in the Medical Sciences

Sam M. Beiser (Ph.D., Candidate, Columbia University, 1951)
Immunochemical studies on mutants of *E. coli*—Tuberculosis Research Laboratory, USPHS, New York, with Bernard D. Davis.

William H. Bergstrom (M.D., University of Rochester, 1945)
Ability of bone to act as an effective reservoir of sodium and potassium—Harvard Medical School, with James L. Gamble.

Evan Calkins (M.D., Harvard Medical School, 1945)
Potassium exchange; influence of hibernation and exposure to cold—Harvard Medical School, with A. Baird Hastings.

Sam L. Clark, Jr. (M.D., Harvard Medical School)
Relationship of folic acid, citrovorum factor, and vitamin B_{12} to the metabolism of vitamin C and hematopoeisis—Vanderbilt University, with William J. Darby.

Norman A. Coulter, Jr. (M.D., Harvard Medical School, 1950)
Effect of physical agents on functional activity and oxidative metabolism of nerve elements—Johns Hopkins University, with M. G. Larrabee and Haldan K. Hartline.

Charles F. Crampton (Ph.D., Candidate, Indiana University, 1951)
Nucleo proteins: their isolation, fractionation, and role in protein synthesis—Columbia University, with Erwin Chargaff.

Paul F. Cranefield, Jr. (Ph.D., Candidate, University of Wisconsin, 1951)
Studies in the field of biophysics—Johns Hopkins University, with Detlev W. Bronk.

Irving G. Kagan (Ph.D., University of Michigan, 1950)
Immunology of schistosomiasis: the histopathology and cellular response in mice immunized to *Schistosomatium douthitti*—University of Chicago, with William H. Taliaferro.

Edmund Klein (M.D., Candidate, University of Toronto, 1951)
Protein chemistry as related to serum fractionation—Harvard Medical School, with John T. Edsall.

John A. MacLaren (Ph.D., Candidate, Vanderbilt University, 1951)
Determination of metabolic products of certain pathogenic fungi grown in chemically defined media—National Institutes of Health, Bethesda, Md., with Chester W. Emmons.

John F. Otto, Jr. (M.D., University of Cincinnati, 1948)
Mechanism of action of thioureas in relation to thyroidal activity, carbohydrate metabolism, and adrenal-thyroid relationships—Joseph H. Pratt Diagnostic Hospital, and Tufts College, with E. B. Astwood.

John H. Vaughan (M.D., Harvard Medical School, 1945)
Nature of the skin reacting substance in human serum—Presbyterian Hospital, New York, with Elvin Kabat.

Fellows in Tuberculosis

Oscar J. Balchum (M.D., Wayne University, 1943)
Physiology of the alveolo-capillary membrane of the lungs and the efficiency of intrapulmonary mixing in health and diseases of the heart and lungs in humans and in animals—National Jewish Hospital, Denver, with Abe Ravin.

James G. Hirsch (M.D., Columbia University, 1946)
Elucidation of the biochemical factors that affect the fate of tubercle bacilli *in vivo*—Rockefeller Institute for Medical Research, New York, with Rene J. Dubos.

Fellow in Poliomyelitis

Katherine Sprunt (M.D., Johns Hopkins University, 1945)
Study of a hitherto unknown rickettsia-like organism isolated from the vesicle fluid of patients believed to have chicken pox; attempt to produce neutralizing antibodies for the virus of diarrhea of the newborn in the mother before delivery and in the rabbit for therapeutic purposes in an epidemic—Babies Hospital, New York, with Hattie Alexander.

SCHOLARS IN CANCER RESEARCH

Upon the recommendation of the Executive Committee of the Committee on Growth, NRC, the American Cancer Society has awarded five scholarships in cancer research. These grants were made to scientists of outstanding promise, who have recently completed their training, to help them establish themselves in their careers as cancer investigators. Each scholar will receive $6,000 annually for a period of three years. The following individuals have been appointed Scholars in Cancer Research to work at institutions indicated:

Chauncey G. Bly (M.D., University of Rochester, 1946; Ph.D., University of Rochester, 1951), Department of Pathology and Oncology, University of Kansas Medical School.

Emmanuel Farber (M.D., University of Toronto, 1942; Ph.D., University of California, 1949), Department of Pathology, Tulane University School of Medicine.

Harold R. Garner (Ph.D., Purdue University, 1950), Department of Biological Sciences, Purdue University.

Henry J. Koch, Jr. (M.D., Harvard University, 1943), Department of Clinical Investigation, Memorial Center for Cancer and Allied Diseases, New York City.

Jesse F. Scott (M.D., Vanderbilt Medical School, 1941), Department of Medicine, Massachusetts General Hospital.

FELLOWSHIP AWARDS

Merck fellowships, supported by Merck and Company, Inc., were awarded to nine of fifty-seven applicants. Six were appointed for one year and three received second-year appointments; four will pursue their fellowship work abroad.

RCA fellowships, supported by the Radio Corporation of America, were awarded to seven of twenty applicants. These seven will pursue studies in the general field of electronics leading to the Ph.D. degree.

NRC fellowships in the natural sciences, supported by the Rockefeller Foundation, were awarded to thirteen out of 103 applicants. Four of the appointees are in the field of biology, three in chemistry, three in physics, and three in mathematics.

INTERNATIONAL RELATIONS

PACIFIC SCIENCE CONGRESS

Plans are progressing for the Eighth Pacific Science Congress to be held in the Philippines. Although the dates have not been finally settled it is hoped that the Congress can be held in the fall of 1953. B. M. Gonzales, President of the University of the Philippines, is Chairman of the Organizing Committee. Patrocina Valenzuela, Dean of the Medical School, University of the Philippines, is Secretary-General of the Congress.

PACIFIC SCIENCE BOARD

Program Planning

Harold J. Coolidge, Executive Secretary of the Pacific Science Board, has returned to Washington following six weeks in the Pacific area. Mr. Coolidge visited Hawaii, the Philippines, Okinawa, and Japan, participating in symposia on Pacific research, attending conferences, and arranging for research programs to be carried out under the auspices of the Pacific Science Board.

Coral Atoll Research

A symposium on Coral Atoll Research, sponsored by the Board and arranged by scientists in Hawaii, was held at the University of Hawaii on February 5 and 6. Commander J. Ward Brock, Head of the Geography Branch, and John Field, Head of the Biology Branch of the Office of Naval Research in Washington, attended. The Office of Naval Research provides funds for the Board's program of scientific investigations in Micronesia, including research on coral atolls.

Research in the Ryukus

Plans for the Board to cooperate with the Department of the Army in a program of scientific investigations in the Ryuku Islands have been formulated in a series of conferences arranged by Colonel J. M. Lewis, Administrative Officer in Okinawa, and attended by Mr. Coolidge. The Pacific Science Board will select and send out scientists on four- to six-month research assignments in the Ryuku Islands. The program will be financed by the Department of the Army.

SCIENTIFIC UNIONS

IGU

Plans for the Seventeenth International Geographical Congress to be held in Washington, D. C., in August 1952 were approved by the U.S.A. National Committee at a meeting held in Chicago on March 19. The Chairman of the Committee announced that the Association of American Geographers and the National Council of Geography Teachers had decided to hold their 1952 annual meetings in Washington immediately prior to the opening of the Congress.

The Third Pan American Consultation on Geography is scheduled to meet in Washington, July 25–August 4, 1952 and the centennial celebration of the American Geographical Society will take place in New York City, August 4–6, 1952.

To facilitate coordination of programs being planned for the summer of 1952, it was agreed that a program coordinating committee should be appointed. The following were designated to serve on the committee: Preston E. James, President, Association of American Geographers, and U. S. member of the Commission on Geography, Pan American Institute of Geography and History; Meredith F. Burrill, Secretary-General, Third Pan American Consultation on Geography; Clyde F. Kohn, Vice-President, National Council of Geography Teachers; George H. T. Kimble, Director, American Geographical Society; and Wallace W. Atwood, Jr., Chairman, U.S.A. National Committee of the International Geographical Union.

URSI

The U.S.A. National Committee of the International Scientific Radio Union (URSI) held its annual meeting in Washington on April 16, 17, and 18, 1951. The meetings were held at the National Bureau of Standards as part of the celebration of the semi-centennial of the founding of the Bureau. The scientific program was sponsored jointly by the U.S.A. National Committee and the Professional Group on Antennas and Propagation of the Institute of Radio Engineers. Reports dealt largely with the work of four URSI National Commissions.

IAU

Word has been received from the Secretary of the International Astronomical Union that the executive committee of the Union has voted to postpone the Eighth General Assembly scheduled to be held in Leningrad in August 1951. Future plans have not been announced.

AFFILIATED SOCIETIES

This Department of NEWS REPORT is reserved for announcements of annual meetings, research programs, and other activities of societies which are affiliated with the NRC.

AMERICAN ACADEMY OF ARTS AND SCIENCES

The American Academy of Arts and Sciences has announced the following fourteen research grants from the Permanent Science Fund of the Academy: Elso S. Barghoorn, Harvard University, $400 (Paleobotany); Leon Ciereszko, University of Oklahoma, $600 (Biochemistry); William Emerson, Massachusetts Institute of Technology, $1,000 (Architecture); Alexander Forbes, Harvard University, $1,000 (Biophysics); Zareh Hadidian, Tufts College, $1,500 (Pharmacology); Charles Heiser, Jr., Indiana University, $1,000 (Botany); John James, University of Oregon, $400 (Sociology); Giuseppe Moruzzi, University of Pisa, Italy, $1,200 (Physiology); James W. Patterson, Western Reserve University, $1,500 (Biochemistry); Nicholas Polunín, Harvard University, $1,500 (Botany); Olive Watkins Smith, Fearing Research Laboratory, Brookline, Massachusetts, $1,000 (Medicine); Harry Sobotka, Mount Sinai Hospital, New York City, $1,000 (Biochemistry); Karl Viëtor, Harvard University, $1,000 (History); Talbot H. Waterman, Yale University, $500 (Zoology).

AMERICAN SOCIETY FOR TESTING MATERIALS

The 1951 annual meeting of the American Society for Testing Materials will be held in Atlantic City, June 18–22. The program will include symposia on Flame Photometry, Structural Sandwich Construction, Acoustical Materials, Consolidation Testing of Soils, Surface and Subsurface Reconnaissance, Bulk Sampling, and Ultimate Consumer Goods.

A feature of the program will be the Edgar Marburg Lecture to be given by Frank L. LaQue, Chief of the Corrosion Engineering Section, International Nickel Co. Mr. LaQue will speak on corrosion testing.

SURVEYING AND MAPPING

The American Congress on Surveying and Mapping will hold its Eleventh Annual Meeting in Washington, on June 18, 19, and 20. Surveyors, topographical engineers, and other map-making specialists from the United States, Canada, and Latin America will attend. The theme of the meeting will be "Surveys and Maps Are the Basic Blueprints for Peace and Development." The program will include the presentation of papers dealing with cartography, control surveys, property surveys, surveying instruments, and participation of the American Republics in Western Hemisphere mapping activities. Maps and charts produced by U. S. Government agencies will be exhibited.

Gerald FitzGerald, Chief of the Topographic Division of the U. S. Geological Survey, is President of the Congress.

AAAS

The Pacific Division of the American Association for the Advancement of Science will meet on the campus of the University of Southern California in Los Angeles, June 18–22. Western sections of some of the societies affiliated with the AAAS have scheduled meetings for this period. Details regarding the meeting of the Pacific Division may be obtained from Robert C. Miller, California Academy of Sciences, San Francisco 18, California.

AMERICAN MATHEMATICAL SOCIETY

Regional meetings of the American Mathematical Society scheduled for the remainder of this year will be held in New York City, April 27–28; Chicago, April 27–28; Stanford, April 28; University of Maryland, June 22–23; Washington State College, June 16; Minneapolis, September 4–7; Washington, D. C., October 27; University of Oklahoma, November 23–24; Providence, R. I., December 26–28.

THE CALENDAR

The following Academy–Research Council meetings will be held in Washington unless otherwise indicated. Attendance is restricted to members and invited guests except when meetings are announced as open to the public.

May

3	Committee on Geophysics, Advisory to Office of Naval Research
3	Food Protection Committee
4	Subcommittee on Radiobiology, NRC Committee on Nuclear Science, *Cleveland, Ohio*
4–5	Semi-annual Meeting, Food and Nutrition Board
4–5	Advisory Committee on Physiology to Office of Naval Research, AIBS, *Cleveland, Ohio*
7–10	Advisory Committee on Artificial Limbs
9	Subcommittee on American Registry of Pathology
9–10	Committee on Field Techniques, *Ann Arbor, Mich.*
10	Committee on Pathology
11–12	Annual Meeting, Division of Anthropology and Psychology
14	Executive Committee, Division of Biology and Agriculture
14	Governing Board, American Institute of Biological Sciences
15	Annual Meeting, Division of Biology and Agriculture
15	Ad hoc Dental Conference
18	Committee on Problems of Alcohol
21	Committee on Psychiatry
22	Annual Meeting, Division of Engineering and Industrial Research
22	Scientific Advisory Committee, Prevention of Deterioration Center
22–23	Advisory Committee on Biochemistry, AIBS, *Monterey, Calif.*
23	Committee on Cancer Diagnosis and Therapy
24	Ad hoc Conference on Fat Emulsions
24	Building Research Advisory Board
24–25	Advisory Committee on Biology, AIBS, *Los Angeles, Calif.*
25	Committee on Veterans Medical Problems
26	Annual Meeting, Division of Medical Sciences
27	U.S.A. Delegation to International Union of Pure and Applied Chemistry
28	Committee on Preservation of Indigenous Strains of Maize
29	Committee on Use and Care of Natural Resources

June

8	Metallurgical Advisory Board
13–15	The President's Highway Safety Conference
25	Committee on Growth, *San Francisco, Calif.*

NEW PUBLICATIONS

Annual Report 1950, Conference on Electrical Insulation. National Research Council, 1951. 108 p. $3.00. Mimeographed.

Bibliography on Durability of Concrete. Physical Reactions. Highway Research Board, Bibliography No. 8. National Research Council, 1951. 35 p. $0.60. Mimeographed.

Committee on Growth of the National Research Council. Fifth Annual Report to American Cancer Society, Inc., July 1949–June 1950. National Research Council. 384 p.

Fire Resistance of Non-Load-Bearing Exterior Walls. National Research Council, 1951. 60 p. $3.50.

GUILBERT, H. R., and LOOSLI, J. K. *Comparative Nutrition of Farm Animals.* Reprint and Circular Series No. 132. National Research Council, 1951. 16 p. $0.50.

Hog Cholera Problem in the U. S. National Research Council, 1951. 21 p. Mimeographed.

Nutritional and Metabolic Requirements in Relation to Radiation Injuries and Thermal Burns. National Research Council, 1951. 80 p. Mimeographed.

Plans for Studies of America's Trained Talent. Commission on Human Resources and Advanced Training, Report No. 2. Conference Board of Associated Research Councils, 1951. 12 p.

The Problem of Heat Injury to Dietary Protein. Reprint and Circular Series No. 131. National Research Council, 1950. 19 p. $0.50.

Proceedings of the Alaskan Science Conference of the National Academy of Sciences, National Research Council. Bulletin No. 122. National Research Council, 1951. 214 p. $2.00.

Progress in Roadside Protection. Highway Research Board Bulletin No. 30. National Research Council, 1951. 50 p. $0.75.

Therapeutic Nutrition, with Special Reference to Military Situations. National Research Council, 1951. 148 p. Mimeographed.

Undernutrition and Starvation. National Research Council, 1951. 33 p. Mimeographed.

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